

THE CLAIMS ARE:

1. A tube retainer for use with a corrugated tube to permit movement of the corrugated tube through the tube retainer in only one direction, said tube retainer comprising:

5 a cylindrical housing with an outer surface and an opening through it that is concentrically located in the cylindrical housing, the opening having an inner surface and further having at least one hole extending radially from the inner surface to the outer surface;

10 a pin having a top surface and a short side and a long side, the pin being mounted to slide in the hole, the pin further having a transitional end between the long side and the short side, the transitional end extending beyond the inner surface into the opening; and

means for forcing the pin toward the opening.

15 2. A tube retainer according to claim 1 wherein the hole has an upper section with a cross-sectional area and a lower section with a cross-sectional area smaller than the cross-sectional area of the upper section.

20 3. A tube retainer according to claim 1 wherein the hole has an upper section with a cross-sectional area and a lower section with a cross-sectional area smaller than the cross-sectional area of the upper section and the lower section is longer than the upper section.

4. A tube retainer according to claim 1 wherein the cylindrical housing has a groove located about the outer surface.

5. A tube retainer according to claim 1 wherein the cylindrical housing has a groove located about the outer surface and the hole extends from the groove on the outer surface.

6. A tube retainer according to claim 1 wherein there is a channel in the top surface of the pin, the channel having substantially the same size and configuration as the channel.

7. A tube retainer according to claim 1 wherein there is a channel in the top surface of the pin, the channel having substantially the same size and configuration as the groove and wherein the means for forcing the pin toward the opening is an O-ring located in the groove and the channel.

8. A tube retainer according to claim 1 wherein the transitional end is a beveled end.

9. A tube retainer according to claim 1 wherein the transitional end is contoured end.

10. A tube retainer for use with a corrugated tube to permit movement of the corrugated tube through the tube retainer in only one direction, said tube retainer comprising:

a cylindrical housing with an outer surface and an opening through it that is concentrically located in the cylindrical housing, the opening having an inner surface and a groove located about the cylindrical housing and further having at least one hole extending radially from the inner surface to the outer surface, the hole being larger adjacent the outer surface;

a pin having a top surface and a short side and a long side, the pin being

mounted to slide in the hole, the pin further having a channel across its top surface and having a transitional end between the long side and the short side, the transitional end extending beyond the inner surface into the opening; and

an O-ring located in the groove and the channel of the pin, the channel being
5 located generally at a right angles to the bevel.

11. A tube retainer according to claim 8 wherein there is a channel in the top surface of the pin, the channel having substantially the same size and configuration as the groove and wherein the means for forcing the pin toward the opening is an O-ring located in the groove and the channel.

10 12. A tube retainer according to claim 10 wherein the cylindrical housing has a groove located about the outer surface and the hole extends from the groove on the outer surface.

13. A tube retainer according to claim 10 wherein the hole has an upper section with a cross-sectional area and a lower section with a cross-sectional area smaller than
15 the cross-sectional area of the upper section and the lower section is longer than the upper section.

14. A tube retainer according to claim 10 wherein the holes and the pins have a circular cross section.

15. A tube retainer according to claim 10 wherein the transitional end is a
20 beveled end.

16. A tube retainer according to claim 10 wherein the transitional end is contoured end.

17. A tube retainer according to claim 10 wherein the transitional end is a

beveled end which has an acute angle of approximately sixty degrees.

18. A tube retainer for use with a corrugated tube to permit movement of the corrugated tube through the tube retainer in only one direction, said tube retainer comprising:

5 a cylindrical housing with an outer surface and having a front surface and a rear surface and an opening through it that is concentrically located in the cylindrical housing extending between the front surface and the rear surface, the opening having an inner surface and a groove that is rounded located on the outside surface about the cylindrical housing and further having a plurality of holes extending radially about the
10 inner surface to the groove in the outer surface, each hole having an upper section adjacent the outer surface and a lower section adjacent the inner surface, the lower section having a smaller cross-sectional area than the upper section, the lower section being longer than the upper section;

pins each having a top surface and a short side and a long side, the pin being
15 mounted to slide in one of the holes, the pin having a channel across its top surface and having a transitional end between the long side and the short side, the channel having substantially the same size and shape as the groove, the transitional end extending beyond the inner surface into the opening, the long side being closer to the front surface than the short side; and

20 an O-ring located in the groove and the channel of the pin, the channel being located generally at a right angle to the bevel.

19. A tube retainer according to claim 18 wherein the transitional end is a beveled end.

20. A tube retainer according to claim 18 wherein the transitional end is contoured end.